



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/527,342	10/11/2005	Roland Callens	05129-00090-US	7211
23416 7590 09/22/2009 CONNOLLY BOVE LODGE & HUTZ, LLP P O BOX 2207 WILMINGTON, DE 19899			EXAMINER WONG, EDNA	
			ART UNIT 1795	PAPER NUMBER
			MAIL DATE 09/22/2009	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/527,342	Applicant(s) CALLENS ET AL.	
	Examiner EDNA WONG	Art Unit 1795	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 June 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 30-34, 37-49 and 55-65 is/are pending in the application.
- 4a) Of the above claim(s) 41-49, 55-58 and 65 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 30-34, 37-40 and 59-64 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

This is in response to the Amendment dated June 25, 2009. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office Action.

Response to Arguments

Election/Restrictions

This application contains claims **41-49 and 55-58** drawn to an invention nonelected with traverse in the reply filed on December 12, 2008. A complete reply to the final rejection must include cancellation of nonelected claims or other appropriate action (37 CFR 1.144) See MPEP § 821.01.

Claim **65** is withdrawn from consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention. Applicant timely traversed the restriction (election) requirement in the reply filed on December 12, 2008.

Specification

The abstract of the disclosure has been objected to because the word “means” is used in lines 3 and 11-13. Correction is required. See MPEP § 608.01(b).

The objection of the disclosure has been withdrawn.

Claim Objections

Claims **33-34 and 59-63** have been objected to because of minor informalities.

The objection of claims 33-34 and 59-63 has been withdrawn in view of Applicants' amendment.

Claim Rejections - 35 USC § 112

I. Claims **33-38, 40 and 64** have been rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The rejection of claims 33-38, 40 and 64 under 35 U.S.C. 112, second paragraph, has been withdrawn in view of Applicants' amendment.

II. Claim **40** has been rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections. See MPEP § 2172.01. The omitted structural cooperative relationships are: the group T and the formula $R_1R_2R_3C-NR_4-Q-NR_3^+Y^-$.

The rejection of claim 40 under 35 U.S.C. 112, second paragraph, has been withdrawn in view of Applicants' amendment.

Claim Rejections - 35 USC § 102/103

I. Claims **30-33, 35-39 and 59-62** have been rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over **Dutcher et**

al. (US Patent No. 4,931,155).

The rejection of claims 30-33, 35-39 and 59-62 under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Dutcher et al. has been withdrawn in view of Applicants' amendment.

II. Claim **30** has been rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over **Thurmuller et al.** (US Patent No. 6,663,764 B2).

The rejection of claim 30 under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Thurmuller et al. has been withdrawn in view of Applicants' amendment.

Claim Rejections - 35 USC § 103

I. Claim **34** has been rejected under 35 U.S.C. 103(a) as being unpatentable over **Dutcher et al.** (US Patent No. 4,931,155) as applied to claims 30-33, 35-39 and 59-62 above.

The rejection of claim 34 under 35 U.S.C. 103(a) as being unpatentable over Dutcher et al. as applied to claims 30-33, 35-39 and 59-62 above has been withdrawn in view of Applicants' amendment.

II. Claim **40** has been rejected under 35 U.S.C. 103(a) as being unpatentable over

Dutcher et al. (US Patent No. 4,931,155) as applied to claims 30-33, 35-39 and 59-62 above, and further in view of **Moingeon et al.** (US Patent No. 4,824,532).

The rejection of claim 40 under 35 U.S.C. 103(a) as being unpatentable over Dutcher et al. as applied to claims 30-33, 35-39 and 59-62 above, and further in view of Moingeon et al. has been withdrawn in view of Applicants' amendment.

III. Claims **63 and 64** have been rejected under 35 U.S.C. 103(a) as being unpatentable over **Thurmuller et al.** (US Patent No. 6,663,764 B2) as applied to claim 30 above.

The rejection of claims 63 and 64 under 35 U.S.C. 103(a) as being unpatentable over Thurmuller et al. as applied to claim 30 above has been withdrawn in view of Applicants' amendment.

Response to Amendment

Claim Objections

Claims **50-54** are objected to because of the following informalities:

Matter canceled by amendment can be reinstated only by a subsequent amendment presenting the canceled matter as a new insertion. A claim cancelled by amendment (deleted in its entirety) may be reinstated only by a subsequent amendment presenting the claim as a new claim with a new claim number (MPEP § 714(II)(H)).

Appropriate correction is required.

Claim Rejections - 35 USC § 112

Claims **30-34, 37-40 and 59-64** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 30

line 20, “the hetero atom T” lacks antecedent basis.

Claim 34

lines 1-3, recites “wherein Y is a mixture consisting essentially of 90 to 99.5% by weight of at least one ion selected from the group consisting of ClO_4^- , BF_4^- , PF_6^- , Tos^- and PhSO_3^- and 0.5 to 10% by weight of Cl^- ”.

It is unclear from the claim language how Y is a mixture, e.g., ClO_4^- - Cl^- as presently claimed. The formula (I) would be $R_1R_2R_3C-T-Q-X \text{ } \underline{\text{ClO}_4^-}\text{-}\underline{\text{Cl}^-}$ (= Y). Wouldn't the two negative ions repel each other?

Claim 38

line 1, “at least R3” is indefinite. What is “R3” being compared to?

Claim 40

line 3, "R₃" is indefinite. The definition of "R₃" is missing in the claim.

Claim 59

line 2, "said electrochemical reaction" lacks antecedent basis.

Claim Rejections - 35 USC § 102/103

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims **30, 37-39 and 59-64** are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over **Lindsey, Jr. et al.** (US Patent No. 2,680,713).

Lindsey, Jr. teaches a method of carrying out an electrooxidation reaction which comprises:

• subjecting a reagent to an electrooxidation (= electrolytic oxidation) [col. 1, line 47 to col. 2, line 4],

wherein said reagent comprises an organic compound salt of general formula (I):



wherein:

X is a charged group;

Y is a counter-ion;

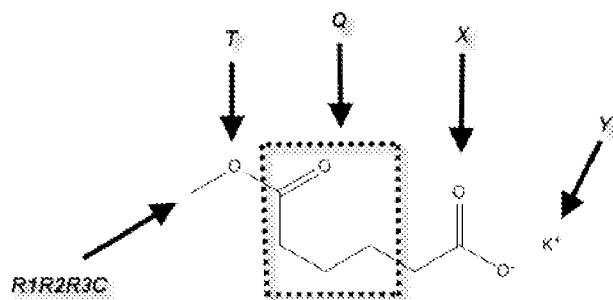
R₁R₂R₃C means a substituted carbon atom, capable of reacting in the electrooxidation reaction;

R₁ and R₂ independently are hydrogen atoms, organic residues or R₁ and R₂ together form organic residues or at least one R₁ or R₂ form a ring with the group X, the group Q or the group T;

R₃ is a group capable of being modified in the course of the electrooxidation reaction;

T means an activating group containing a hetero atom selected from the group consisting of N-R₄, O and S, wherein R₄ is a hydrogen atom or an organic residue; and

Q means a connecting group linking the hetero atom T and the charged group X
(= a monoester salt of a dicarboxylic acid, e.g., potassium methyl adipate:

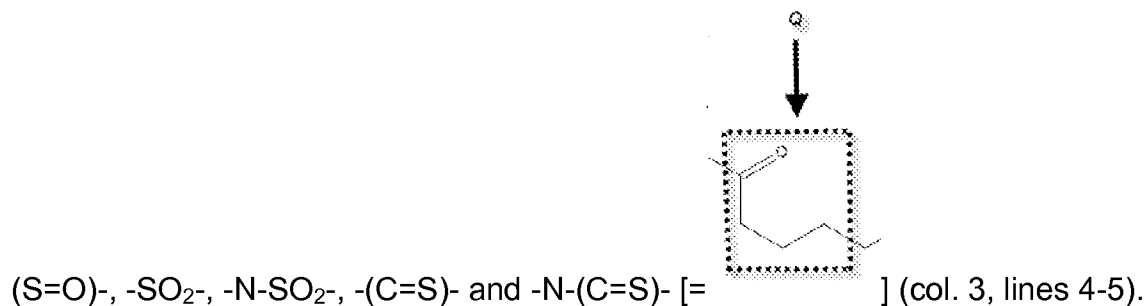


potassium methyl adipate

) [col. 2, line 53 to col. 3, line 23; and col.

7, lines 17-53].

The group Q is a linear or branched alkylene or cyclo-alkene group, optionally substituted with a functional group and optionally linked to the group T by a functional selected from the group consisting of $-(C=O)-$, $-N-(C=O)-$, $-O-(C=O)-$, $-(S=O)-$, $-N-$



At least R^3 is hydrogen (= $R^1R^2R^3C$ = CH_3).

The organic compound salt comprises at least one stereogenic center and is enantiomerically pure (col. 7, lines 17-53).

The organic compound salt is provided as a solution in a solvent (= an inert

organic liquid which is a solvent for the reactants, e.g., methanol or aqueous methanol) [col. 3, lines 6-8; and col. 8, lines 5-15].

The solvent is inert under conditions of said electrochemical reaction (= an *inert* organic liquid which is a solvent for the reactants, e.g., methanol or aqueous methanol) [col. 3, lines 6-8].

The method further comprises reacting said reagent comprising said organic compound salt with at least one co-reactant capable of reacting with said organic compound salt (= a conjugated diene, e.g., 1,3-butadiene) [col. 2, line 53 to col. 3, line 23; and col. 7, line 54 to col. 8, line 4].

The solvent is itself a co-reactant capable of reacting with said organic compound salt (= water) [col. 8, lines 12-15].

The electrooxidation of said organic compound salt, wherein said electrooxidation is carried out at a current density of from 0.1 to 50 A/dm² (= current densities of from 0.01 to 0.5 A/cm² = 1 to 50 A/dm²) [col. 3, lines 13-17].

The electrooxidation is carried out at a temperature of from -50 to 100°C (= from -20° to 100° C) [col. 3, lines 24-36].

Allowable Subject Matter

The following is a statement of reasons for the indication of allowable subject matter:

Claims **31 and 32** define over the prior art of record because the prior art does

not teach or suggest the method according to claim 30, wherein the group X is a cationic group.

Claims **33 and 34** define over the prior art of record because the prior art does not teach or suggest the method according to claim 30, wherein Y is Br⁻, Cl⁻, ClO₄⁻, BF₄⁻, PF₆⁻, toluene-sulphonate (Tos⁻) or benzenesulphonate (PhSO₃⁻).

Claim **40** define over the prior art of record because the prior art does not teach or suggest the method according to claim 30, wherein the organic compound salt corresponds to the formula



wherein the group Q is a linear or branched alkylene group, optionally substituted with a functional group and linked to the group T by a functional selected from the group consisting of -(C=O)-, -N-(C=O)-, -O-(C=O)- and -SO₂- and T in the formula (I) is NR₄ and X in the formula (I) is NR₃⁺.

The prior art does not contain any language that teaches or suggests the above. *Lindsey, Jr.* teaches that the group X is an anionic group and Y is a cationic counter-ion. Therefore, a person skilled in the art would not have been motivated to adopt the above conditions, and a *prima facie* case of obviousness cannot be established.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37

CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to EDNA WONG whose telephone number is (571) 272-1349. The examiner can normally be reached on Mon-Fri 7:30 am to 4:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nam Nguyen can be reached on (571) 272-1342. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should

Art Unit: 1795

you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Edna Wong/
Primary Examiner
Art Unit 1795

EW
September 20, 2009